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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/578,228	05/24/2000	Robert L. Heimann	EL017RH-2	4626

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EXAMINER

MULLINS, BURTON S

ART UNIT PAPER NUMBER

2834

DATE MAILED: 07/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/578,228

Applicant(s)

HEIMANN ET AL.

Examiner

Burton S. Mullins

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 May 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3. 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claim 28 is objected to because of the following informalities: change "comprising" to --comprises---. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 20-25 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fahy (US 5,488,984) in view of van Ooij et al. (US 5,108,793). Fahy teaches an electric motor rotor lamination treatment and manufacturing method including a squirrel-cage rotor assembly 1 comprising core 3 made of plural laminations 5 of high-magnetic permeability sheet steel (Figs.1-2). The core is placed in a mold and molten aluminum contacts the lamination slots 13 to form bars 15 and end rings 17.

Fahy teaches a Nitrosol B coating for the laminations which prevents rotor soldering, but does not disclose a coating for the laminations comprising at least one silica containing composition having a basic pH.

Van Ooij teaches a silicate coating for sheet steel to protect against corrosion (c.1, lines 6-12). The sheet is rinsed in a waterglass solution of silicate at basic pH levels (e.g., a pH of 12 in Example 1). See c.4, lines 32-43.

It would have been obvious to one having ordinary skill in the art at the time of the invention to provide Fahy with a silicate coating with basic pH per van Ooij since such a

coating would have been desirable to provide corrosion resistance to the sheet steel rotor laminations. Regarding claims 22-24, the coating of van Ooij inherently performs the functions of isolating and electrically insulating the substrate from the metal molding, as well as providing a "barrier" between the substrate and the metal molding.

Regarding claim 29, the coating of van Ooij would be inherently electrically resistive.

4. Claims 20-25, 27, 29 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fahy (US 5,488,984) in view of Heimann et al. (US 6,165,257). Fahy teaches an electric motor rotor lamination treatment and manufacturing method including a squirrel-cage rotor assembly 1 comprising core 3 made of plural laminations 5 of high-magnetic permeability sheet steel (Figs.1-2). The core is placed in a mold and molten aluminum contacts the lamination slots 13 to form bars 15 and end rings 17.

Fahy teaches a Nitrosol B coating for the laminations which prevents rotor soldering, but does not disclose a coating for the laminations comprising at least one silica containing composition having a basic pH.

Heimann teaches a basic silicate coating such as potassium silicate or aluminum silicate to protect against corrosion of ferrous and other metals (abstract; c.8, lines 1-12 and 41-54). The coating includes a carrier such as polyacrylic or polyurethane.

It would have been obvious to one having ordinary skill in the art at the time of the invention to provide Fahy with a silicate coating with basic pH per Heimann since such a coating would have been desirable to provide corrosion resistance to the sheet steel rotor laminations.

5. Claims 26 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fahy and van Ooij or Heimann as applied to claim 25 above, and further in view of Miyosawa (US 4,016,129). Fahy and van Ooij or Heimann do not teach a water-soluble polymer or a borate composition containing boric acid and sodium tetraborate.

Miyosawa teaches a silica coating composition including an aqueous dispersion of silica-polyvinyl alcohol of variable viscosity for coating flexibility and continuity (c.3, lines 1-5) and a boric acid and tetraborate (c.7, lines 28-34) used as curing agents for the coating (c.5, lines 50-52).

It would have been obvious to one of ordinary skill at the time of the invention to modify Fahy and van Ooij or Heimann and provide a water-soluble polymer and boric acid and tetraborate per Miyosawa since these compounds would have been desirable for coating flexibility and as curing agents for the coating, respectively.

6. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fahy and van Ooij or Heimann as applied to claim 25 above, and further in view of Takimoto et al. (US 5,298,059). Fahy and van Ooij or Heimann do not teach a ferromagnetic additive.

Takimoto teaches a silicate coating composition for rust prevention in steel plates (c.1, lines 20-24; c.5, lines 65-c.6, line 2) including ferromagnetic pigments such as iron oxides (c.4, lines 58-59).

It would have been obvious to one of ordinary skill at the time of the invention to modify Fahy and van Ooij or Heimann and provide ferromagnetic additives per Takimoto since pigments would have been desirable to impart color to the coating.

7. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fahy and van Ooij or Heimann as applied to claim 25 above, and further in view of Ettinger et al. (US 4,479,104). Fahy and van Ooij or Heimann do not teach any of the additives in claim 31, e.g., silicon carbide, carbon, etc.

However, Ettinger teaches that it is well known to employ semi-conductive particles such as powdered silicon carbide in insulating enamel coatings for transformer cores, depending upon the degree of conductivity required at the impulse voltage (c.2, lines 27-46).

It would have been obvious to one of ordinary skill at the time of the invention to modify Fahy and van Ooij or Heimann and provide a silicon carbide additive in the coating per Ettinger since such a semi-conductive compound would have been desirable for providing the degree of conductivity required at the impulse voltage.

Response to Arguments

8. Applicant's arguments with respect to claims 20-31 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 2834

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Burton S. Mullins whose telephone number is 305-7063. The examiner can normally be reached on Monday-Friday, 9 am to 5 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are 305-1341 for regular communications and 305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-0956.


Burton S. Mullins
Primary Examiner
Art Unit 2834

bsm
July 1, 2002